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10/568,584	02/17/2006	Rudiger Sens	285229US2PCT	6493
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.			EXAMINER	
1940 DUKE STREET			RAMDHANE, BOBBY	
ALEXANDRIA, VA 22314			ART UNIT	PAPER NUMBER
			1797	
NOTIFICATION DATE	DELIVERY MODE			
02/19/2008	ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/568,584	<b>Applicant(s)</b> SENS ET AL.
	<b>Examiner</b> BOBBY RAMDHANIE	<b>Art Unit</b> 1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 February 2006.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 39-76 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 39-76 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 17 February 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date: _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/1648)<br>Paper No(s)/Mail Date 2-17-06 | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 39, 41-45, 47-52, 56-61, 63, 64, & 66-75 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al (EP1229321). Regarding Claim 39, Clark et al teaches a method for detecting change of a physically measurable property of a sample due to an environmental effect, comprising: (I) Subjecting the sample to the environmental effect for an action time, the environmental effect being made to act on the sample with a known position-dependent intensity distribution, which is based on a pattern function (Abstract); (II) Subsequently detecting transmission, reflection, or scattering of analysis radiation by the sample as a function of position coordinates of the sample and wavelength of the analysis radiation, so as to determine a response function that describes intensity of the transmitted, reflected, or scattered analysis radiation as a function of the position coordinates of the sample and the wavelength (Abstract); and (III) Determining correlation of the known position-dependent intensity distribution of the environmental effect, or of the pattern function on which this is based, with the response function by correlation analysis, the correlation being a measure of the change of the physically measurable property of the sample due to the environmental effect (Abstract).

3. For Claim 41, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect includes action of radiation, and the intensity distribution is a position-dependent and wavelength-dependent intensity distribution ([0003] & Abstract).
4. For Claim 42, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect includes action of light ([0002 & 0003]).
5. For Claim 43, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect includes action of mechanical forces ([0002 & 0003]).
6. For Claim 44, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect action of chemicals ([0002 & 0003]).
7. For Claim 45, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect includes action of gases (0002 & 0003)).
8. For Claim 47, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect includes action of radioactive radiation ([0002 & 0003]).
9. For Claim 48, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect includes action of sound waves ([0002 & 0003]). Examiner takes the position that sound waves are a physical degradation process.
10. For Claim 49, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect includes action of heat (0002)).
11. For Claim 50, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect is caused by weathering of the sample ([0002]). Examiner takes

the position that exposing the sample to the four fundamental elements is the same as weathering.

12. For Claim 51, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect is caused by application of chemicals to the sample ([0003]).

13. For Claim 52, Clark et al teaches the method as claimed in claim 41, wherein the intensity distribution is produced as a reference pattern on the sample ([0001]).

14. For Claim 56, Clark et al teaches the method as claimed in claim 39, wherein the intensity distribution is a periodic intensity distribution with a spatial frequency ([0002 & 0003]). Examiner takes the position that this is an inherent property of any analysis method where the analysis is performed using light.

15. For Claim 57, Clark et al teaches the method as claimed in claim 50, wherein the correlation analysis is a Fourier analysis ([0004]).

16. For Claim 58, Clark et al teaches the method as claimed in claim 39, wherein the transmission, reflection, or scattering of analysis light in UV-VIS and/or NIR ranges is determined ([0004]).

17. For Claim 59, Clark et al teaches the method as claimed in claim 39, wherein the transmission, reflection, or scattering of analysis radiation by the sample is determined for a plurality of wavelength ranges, so as to determine a plurality of response functions for the plurality of wavelength ranges ([0004]). Examiner takes the position that this is an inherent property of the operation of any instrument using Fourier transformation.

Claim 63 (New): The method as claimed in claim 39, wherein the scattering of the analysis light is detected.

18. For Claim 60, Clark et al teaches the method as claimed in claim 59, wherein a response function is respectively determined for red, green and blue light by RGB analysis ([0027]). Examiner takes the position that a CCD camera is capable of analyzing RGB colors.
19. For Claim 61, Clark et al teaches the method as claimed in claim 39, wherein the reflection of the analysis light is detected ([0001]). Examiner takes the position that the measurement of gloss is a definition of reflection.
20. For Claim 63, Clark et al teaches the method of in Claim 39, wherein the scattering of the analysis light is detected ([0027]). Examiner takes the position that scattered light is detected during chemiluminescence.
21. For Claim 64, Clark et al teaches the method as claimed in claim 63, wherein a confocal color measurement system is used for detection of the scattering ([0027]). Examiner takes the position that the Chemilume CL100 is a confocal color measurement system.
22. For Claim 66, Clark et al teaches the method as claimed in claim 39, wherein the reflection or scattering of the analysis light by the sample as a function of the position coordinates is detected using a digital camera ([0027]).
23. For Claim 67, Clark et al teaches the method as claimed in claim 39, wherein the response function is determined using a digital image processing electronics ([0027]).
24. For Claim 68, Clark et al teaches the method as claimed in claim 61 for determining the change of luster of a substrate surface ([0001]). Examiner takes the position that gloss defines luster.

25. For Claim 69, Clark et al teaches the method as claimed in claim 68, wherein the substrate surface is a paint surface ([0030]).
26. For Claim 70, Clark et al teaches the method as claimed in claim 69, wherein the paint is an automobile paint ([0005]).
27. For Claim 71, Clark et al teaches the method as claimed in claim 63 for determining light fastness of colorants, or of substrates colored using the colorants ([0001]).
28. For Claim 72, Clark et al teaches the method as claimed in claim 39 for studying photoinduced or photo-oxidative aging of substances (0027)).
29. For Claim 73, Clark et al teaches the method as claimed in claim 72, wherein the substances are selected from plastics, optionally colored using colorants, paints, textiles, metals, paper wooden articles, construction materials, and cosmetic formulations ([0001]).
30. For Claim 74, Clark et al teaches the method as claimed in claim 39 for studying weatherproofness of substances. [0001-0003]). Examiner takes the position that weatherproofness is defined by Clark et al as durability to withstand outdoor conditions.
31. For Claim 75, Clark et al teaches the method as claimed in claim 39 for studying chemical stability of substances ([0001-0003]). Examiner takes the position that the chemical stability is defined as durability.

***Claim Rejections - 35 USC § 103***

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

33. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

34. Claims 40, 46, 53-55, 62, 65, & 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. Regarding Claim 40, Clark et al teaches the method as claimed in claim 39, wherein the environmental effect is made to act on the sample, which has a specific position-dependent transmission function, so as to produce the position-dependent intensity distribution as an image on the sample, except for the mask for which the effect is acting upon the sample. It would have been obvious to one of ordinary skill in the Art at the time the invention was made to use a mask to effect a condition on the sample because according to Clark et al, it is known in the art that accelerated techniques to exact an effect on coatings to determine the durability of the sample have been known for years ([0003]).

35. For Claim 46, Clark et al teaches the method as claimed in claim 39, except for where the environmental effect includes action of microorganisms. It would have been obvious to one or ordinary skill in the art at the time the invention was made to modify the testing of Clark et al in to include microorganisms because they are found to effect

changes on surfaces of almost everything found in the outdoor environment as well as have adapted to use paints and coatings as a food source.

36. For Claim 53, Clark et al teaches the method as claimed in claim 41 except for producing exposure of the sample to light through the mask, which has a position-dependent and wavelength-dependent transmission function. Clark et al does teach the analysis of tinting of the coatings ([0002]). It would have been obvious to one or ordinary skill in the art at the time the invention was made to modify Clark et al to include this mask because this would allow to various degrees of tinting to be analyzed on coatings without undue experimentation or burden of reformulating coating compositions to make sure of compatibility of the tinting compounds with the formulation.

37. For Claim 54, Clark et al teaches the method as claimed in claim 53, wherein exposure is carried out with artificial or natural sunlight (0002 & 0003)].

38. For Claim 55, Clark et al teaches the method as claimed in claim 53, except for that the mask being a barcode mask. It would have been obvious to one ordinary skill in the art to modify Clark et al with a mask that is a bar code mask because it is known in the art to use masks with barcodes or numbers to etch or mark components of automobiles to prevent theft of the automobile and the illegal selling of the components separately on the black market.

39. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al in view of Bhardwaj et al (US5580172). Regarding Claim 60, Clark et al teaches the method of Claim 59. Clark et al further teaches the response function is respectively determined for red, green and blue light by RGB analysis. Bhardwaj et al explicitly

teaches a system for determining the response as a function of red, green, and blue analysis (Figure 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clark et al with Bhardwaj et al because this would allow for

40. For Claim 62, Clark et al teaches the method of claim 61, except that using telecentric measurement optics are used for detection of the reflection. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clark et al with a telecentric lens because it is well known in the art that the advantage of telecentric optics is that objects at various distances can be measured within a few thousandths of an inch, whereas this measurement could not be obtained with conventional optics.

41. For Claim 65, Clark et al teaches the method as claimed in claim 39 except wherein the reflection or scattering of the analysis light by the sample as a function of the position coordinates is detected using a color scanner. Clark et al does teach the use of analog devices or a CCD camera. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clark et al to use a color scanner because a color scanner is an obvious variant of a CCD camera.

42. For Claim 76, Clark et al teaches the method as claimed in claim 39, except for studying abrasion resistance of coatings on a substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Clark et al with studying abrasion resistance because it is well known in the art that chemical resistance is performed with rubbing Methyl Ethyl Ketone onto the surface of the paint

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and physical resistance is performed by exposure of coatings of Panels to direct sun, wind, and rain exposure as arrays of panels on rooftops. Examiner takes the position that wind and rain carry particles which would allow for abrasion to occur.

***Drawings***

43. The drawings are objected to because the axes for all drawings are not displayed and Figure Captions are not in English. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOBBY RAMDHANIE whose telephone number is (571)270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BR

/Walter D. Griffin/  
Supervisory Patent Examiner, Art Unit 1797